

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)

2. (Canceled)

3. (Currently Amended) An optical pickup device for writing data or reading data recorded on an optical disk, said optical pickup device comprising:

a laser light source for emitting a laser beam for writing data or reading data;

photodetectors having light-receiving portions for respectively receiving a laser beam reflected by recording surfaces of a plurality of layers of the optical disk; and

an optical system for guiding to the optical disk the laser beam emitted from the laser light source, and guiding to the photodetectors the laser beam reflected by the optical disk;

said optical system having:

a half mirror for reflecting or transmitting a laser beam emitted from the laser light source, and transmitting or reflecting the light reflected from the optical disk;

a collimator lens for converting the laser beam reflected or transmitted by the half mirror into parallel light;

an object lens for condensing the laser beam converted to parallel light by the collimator lens onto the recording surfaces of the optical disk, having a curvature or refractive index that varies by steps in the radial direction, and comprising a multifocal lens for focusing on recording surfaces of the optical disk; and

a diffraction grating for diffracting a part of the laser beam transmitted through the half mirror and guiding the laser beam to at least one of the light-receiving portions; wherein

the object lens condenses the laser beam emitted from the laser light source onto the recording surfaces of the optical disk, and

the diffraction grating guides light reflected by the recording surfaces to a plurality of light-receiving portions, so as to simultaneously read or write data to the recording surfaces, and the diffraction grating being spatially separated from the half mirror.

4. (Currently Amended) An optical disk playback device comprising:

the optical pickup device according to claim 3 [[1]];

playback means for simultaneously reading data recorded on recording surfaces of a plurality of layers of an optical disk by means of the optical pickup device and playing back data of one of the recording surfaces; and

storage means for saving data of another of the recording surfaces.

5. (Previously Presented) The optical pickup device of claim 3, wherein the collimator lens is interposed between the half mirror and the optical disk and wherein the object lens is interposed between the collimator lens and the optical disk.

6. (New) The optical pickup device of claim 3, wherein the diffraction grating is arranged on a beam splitter.

7. (New) An optical pickup device comprising:
a laser light source that emits a laser beam for writing data or reading data;
a photodetector having light-receiving portions that respectively receive a laser beam reflected by recording surfaces of a plurality of layers of the optical disk; and

an optical system that guides the laser beam to the optical disk, and guides the laser beam reflected by the optical disk to the photodetector, the optical system comprising

a half mirror that reflects or transmits a laser beam emitted from the laser light source, and transmits or reflects the light reflected from the optical disk;

a collimator lens that converts the laser beam reflected or transmitted by the half mirror into parallel light, and that converts the laser beam reflected by the optical disk from a parallel light into a non-parallel light;

an object lens that condenses the laser beam converted to parallel light by the collimator lens onto the recording surfaces of the optical disk, having a curvature or refractive index that varies by steps in the radial direction, and comprising a multifocal lens that focuses on recording surfaces of the optical disk; and

a diffraction grating that diffracts a part of the laser beam transmitted through the half mirror and guides the laser beam to one of the light-receiving portions of the photodetector, wherein the diffraction grating guides light reflected by the recording surfaces to one of the light receiving portions, so as to simultaneously read or write data to the recording surfaces.

8. (New) The optical pickup device of claim 7, wherein the diffraction grating is attached to the half mirror.

9. (New) The optical pickup device of claim 7, wherein the diffraction grating is spatially separate from the half mirror.

10. (New) The optical pickup device of claim 9, further comprising:
a beam splitter, wherein the diffraction grating is attached to the beam splitter.

11. (New) The optical pickup device of claim 7, wherein the photodetector is a first and second photodetector, each having a light receiving portion.

12. (New) An optical pickup device comprising:
a laser light source that emits a laser beam for writing data or reading data;

a photodetector that receives a laser beam reflected by recording surfaces of a plurality of layers of the optical disk; and

an optical system that guides the laser beam to the optical disk, and guides the laser beam reflected by the optical disk to the photodetector, the optical system comprising

a half mirror that reflects or transmits a laser beam emitted from the laser light source, and transmits or reflects the light reflected from the optical disk;

a collimator lens that converts the laser beam reflected or transmitted by the half mirror into parallel light;

an object lens that condenses the laser beam from the collimator lens onto the recording surfaces of the optical disk, and having a curvature or refractive index that varies by steps in the radial direction, and comprising a multifocal lens that focuses on recording surfaces of the optical disk; and

a diffraction grating that diffracts a part of the laser beam transmitted through the half mirror and guiding the laser beam to the photodetector, wherein the diffraction grating guides light reflected by the recording surfaces to a particular light receiving portions of the photodetector, so as to simultaneously read or write data to the recording surfaces.

13. (New) The optical pickup device of claim 12, wherein the diffraction grating is attached to the half mirror.

14. (New) The optical pickup device of claim 12, wherein the diffraction grating is spatially separate from the half mirror.

15. (New) The optical pickup device of claim 14, further comprising:

a beam splitter, wherein the diffraction grating is attached to the beam splitter.

16. (New) The optical pickup device of claim 12, wherein the photodetector is a first and second photodetector, each having a light receiving portion.